REMARKS

Claims 1-3, 8, 9, 17 and 18 have been amended to more particularly point out and distinctly claim the invention. Claims 1-18 remain pending in the application. The Applicant respectfully requests the Examiner to reconsider claims 1-18 in view of the following remarks.

The Examiner rejected claims 1-14 and 18 under 35 U.S.C. 102(e) as anticipated by U.S. Patent No. 6,108,008 to Ohta. The Examiner reads Ohta to disclose all of the limitations in these claims through the disclosure of Fig. 7, and the discussion of Fig. 7 and its components throughout the Ohta patent. The Applicant respectfully disagrees that the Ohta patent anticipates claims 1-14 and 18, and traverses the Examiner's rejection for the reasons noted below.

In the specification, the Applicant discloses a "rendering intent selection engine for selecting a rendering intent." Specification, p. 2, ll. 14-15. "The rendering intent selection engine receives a color document or image and a set of rendering intents. It renders the image according to the received rendering intents, and simultaneously previews the rendered images. It receives a selection from among the simultaneously previewed rendered images, and selects a rendering intent based upon the received rendered image." Specification, p. 2, ll. 18-22. "The rendering intent selection engine can preview differences in rendered images rather than the images themselves." Specification, p. 3, ll. 3-4. "The rendering intent selection engine creates the difference images between a rendered image and a reference image. The reference image can be the source image, or another rendered image." Specification, p. 3, ll. 8-10.

The Applicant's claims 1-8, as amended, claim methods and associated computer program products for selecting a rendering intent comprising "generating a plurality of rendered images by rendering [a] source image using [a] received plurality of rendering intents; receiving input selecting a contrast mode; contrasting the rendered images by simultaneously previewing the rendered images according to the selected contrast mode; and selecting a rendering intent by receiving from a user a selected contrasted rendered image from the simultaneously previewed images." Similarly, claims 9-14 and 18, as amended, claim methods and associated computer program products for selecting a rendering intent comprising "generating a plurality of rendered images by rendering the received image according to the plurality of rendering intents;

simultaneously previewing a plurality of difference images, wherein each difference image represents a difference between one of the plurality of rendered images and a reference image; and selecting a rendering intent by receiving from a user a selected difference image from the plurality of simultaneously previewed difference images."

In contrast to the Applicant's rendering intent selection engine, the Ohta patent discloses an image processing apparatus that performs "color conversion of color image data to achieve faithful reproduction in an image recording device." Col. 1, ll. 6-9. The patent discloses using rendering intents or "color space conversion means 2" to convert image "R, G, B values into Y, M, C, K values to be used in and dependent on [a] printer 11 constituting the output device currently connected to [a] system, utilizing the input and output profiles read by the input and output profile setting/reading means 3, 5." Col. 3, line 64 – Col. 4, line 2. The "[i]nput profile setting/reading means 3 sets and reads the input profile, according to the kind of monitor set by the monitor setting means." Col. 4, ll. 5-7. The "[o]utput profile setting/reading means 5 sets and reads the output profile, according to the printer condition set by the printer condition setting means 9." Col. 4, ll. 50-53. Thus, Ohta describes an image processing system that receives a single image on an input, selects a single input color profile based on the type of input device indicated by monitor kind setting means 12, selects a single output color profile based on the type of output device indicated by printer condition setting means 9, and converts or renders the single image on the output device through the color space conversion means 2.

Figure 7 of Ohta discloses a variation of the image processing system thus described, wherein "in addition to the output profile memory means 7 of the first embodiment, a preview profile memory means 71 is provided for storing profile data for preview. Such preview profile allows, when a preview mode is turned on, to preview, on the monitor, the color based on the image data subjected to color space compression, namely the color actually obtained on the recording device from the image data not reproducible thereon." Col. 8, line 65 – Col. 9, line 6. Thus, in Fig. 7, Ohta discloses adding to the output profile setting/reading means 5 a second input, namely, the preview mode setting means 73, to allow the output profile setting/reading means 5 to set and read an output profile from either the preview profile storage means 71 or the printer profile storage means 70, depending upon whether the preview mode setting means 73 indicates that a preview mode is turned on. Consequently, Fig. 7 of Ohta describes nothing more

than an image processing system that receives a single image, selects a single input color profile based on the type of input device indicated by monitor kind setting means 12, selects a single output profile based on the type of output device indicated by printer condition setting means 9 and preview mode setting means 73, and converts or renders the single image on the output device (i.e., either printer 11 or monitor 10) depending on whether the image is to be previewed as indicated by preview mode setting means 73.

Significantly, Ohta's image processing system fails to disclose all of the following limitations recited in claims 1-8: "generating a plurality of rendered images by rendering [a] source image using [a] received plurality of rendering intents; receiving input selecting a contrast mode; contrasting the rendered images by simultaneously previewing the rendered images according to the selected contrast mode; and selecting a rendering intent by receiving from a user a selected contrasted rendered image from the simultaneously previewed images." Similarly, Ohta's image processing system fails to disclose all of the following limitations recited in claims 9-14 and 18: "generating a plurality of rendered images by rendering the received image according to the plurality of rendering intents; simultaneously previewing a plurality of difference images, wherein each difference image represents a difference between one of the plurality of rendered images and a reference image; and selecting a rendering intent by receiving from a user a selected difference image from the plurality of simultaneously previewed difference images." Consequently, claims 1-8, 9-14 and 18, as amended, are patentable over Ohta for at least these reasons.

The Examiner rejected claims 15-17 under 35 U.S.C. 103(a) as obvious in view of Ohta and U.S. Patent No. 5,231,504 to Magee. The Examiner found Ohta to disclose all of the limitations of claims 15-17 that are also found in claim 9, but found that Ohta failed to disclose calculating a least squares difference between a rendered image and a reference image (claim 15), or representing the difference between a rendered image and a reference image as a topographical map (claims 16-17). The Applicant notes that claims 15-17 depend from and contain all of the limitations of claim 9, and are therefore patentable over either Ohta or the combination of Ohta and Magee for at least the same reasons that claim 9 is patentable over Ohta as explained above.

In addition, in reference to claim 15, the Examiner stated that "Ohta discloses [*sic*, should be "fails to disclose"] calculating the least squares difference between a rendered image and the reference image, which is disclosed by Magee", citing columns 2-3, lines 62-15, of Magee. The cited passage of Magee is reproduced in its entirety below.

> Color correction methods used to map colors from an additive color system's gamut to a subtractive color system's gamut generally use look up tables, matrices, or mathematical transformations for mapping an input image color to its colorimetric color specification and then to an appropriate matching output color, expressed in subtractive primary coloring agent quantities, in the gamut of the subtractive color reproduction device. These methods generally require the measurement of large numbers of colorimetrically measured color patches produced by the subtractive color reproduction device for representing the output color gamut. See, for example, Hung et. al., U.S. Pat. No. 4,959,711, entitled "Method and Apparatus for Correcting the Color of a Printed Image"; and E'Errico, U.S. Pat. No. 4,941,039, entitled "Color Image Reproduction Apparatus Having a Least Squares Look-Up Table Augmented by Smoothing". These techniques, which require matrices or tables which depend on the color of each primary coloring agent, need to be recalculated whenever a primary coloring agent changes. [Magee, col. 2, line 62 – col. 3, line 15]

From this passage – which relates to processes for mapping colors from one to another color system – it should be clear that Magee does not disclose the limitation of claim 15 that "a difference image is obtained by calculating the least squares difference between a rendered image and the reference image". For this additional reason, claim 15 is patentable over the cited references.

In addition, in reference to claim 16, the Examiner stated that "Ohta fails to disclose representing the differences between a rendered image and the reference images as a topographical map, which is disclosed by Magee", citing column 16, lines 15-40 of Magee. The cited passage of Magee is reproduced in its entirety below.

> In addition, a third conversion method is provided which is intended to facilitate the reproduction of an original image such that the output colors are predictably spaced in the output gamut in the same manner as the colors in the input image relate to each other. This reproduction goal may be preferred in the situation where maximum color matching of the original color image is not required, but clearly and predictably spaced, discriminable colors are the goal. Such a situation, for example, might apply to features in univariate map images

> such as CAT and EMR scans, astronomical images, and geophysical maps. The conversion method provided for this situation treats the RGB color specifications as though, for the equal energy stimulus, R=G=B and, for the tristimulus values XYZ, X=Y=Z. For further information regarding transformations from RGB color specifications to tristimulus values, see Raster Graphics Handbook, at pages A3-17 to A3-23; James D. Foley, Andries van Dam, Steven K. Feiner, and John F. Hughes, Computer Graphics, Principles and Practice, Addison Wesley, 1990, at pages 574-584; and R. W. G. Hunt, Measuring Colour, Ellis Horwood Limited, Chichester, England, 1987 (reprinted in 1989), Chapter 2, Section 2.5, pgs. 45-46, and Chapter 6, Sections 6--6 through 6-7, pgs. 135-139. [Magee, col. 16, lines 15-40]

Considering this passage, it will be seen that no mention is made of either (a) "a topographical map" or (b) "representing the differences between a rendered image and the reference image", as recited in claim 16. For this additional reason, claim 16 is patentable over the cited references.

Claim 17 is amended to depend from claim 16, which depends from claim 9, and is patentable for the reasons set forth above pertaining to each of them.

Attached is a marked-up version of the changes being made by the current amendment.

The Applicant respectfully submits that all of the claims are in condition for allowance, and kindly requests the Examiner to allow all of the claims. Enclosed is a $110.00 check for a one-month extension of time. Please apply any other charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

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Version with markings to show changes made

In the claims:

Claims 1-3, 8, 9, 17 and 18 have been amended as follows:

1. (Amended) A computer implemented method for selecting a rendering intent, the method comprising:

receiving a source color image having colors within a source color gamut;

receiving a plurality of rendering intents, wherein each rendering intent defines a mapping of colors from the source color gamut to a destination color gamut;

generating a plurality of rendered images by rendering the source image using the received plurality of rendering intents;

receiving input selecting a contrast mode;

contrasting the rendered images by simultaneously previewing the rendered images according to the selected contrast mode [simultaneously previewing a plurality of rendered images generated by rendering the received image according to a corresponding rendering intent]; and

selecting a rendering intent by receiving from a user a selected contrasted rendered image from the [plurality of simultaneously displayed] simultaneously previewed images.

2. (Amended) The method of claim 1, wherein the rendered images are contrasted by simultaneously previewing them as a plurality of rendered images [received color image comprises an entire color image].

3. (Amended) The method of claim 1, wherein the rendered images are contrasted by simultaneously previewing them as a plurality of rendered differences [received color image comprises a portion of an entire color image].

8. (Amended) A computer program product, stored on a machine-readable medium, comprising instructions operable to cause a programmable processor to:

receive a source color image having colors within a source color gamut;

receive a plurality of rendering intents, wherein each rendering intent defines a mapping of colors from the source color gamut to a destination color gamut;

generate a plurality of rendered images by rendering the source image using the received plurality of rendering intents;

receiving input selecting a contrast mode;

contrasting the rendered images by simultaneously previewing the rendered images according to the selected contrast mode [simultaneously preview a plurality of rendered images generated by rendering the received image according to a corresponding rendering intent]; and

select a rendering intent by receiving from a user a selected contrasted rendered image from the [plurality of] simultaneously previewed rendered images.

9. (Amended) A computer implemented method for selecting a rendering intent, the method comprising:

receiving a source color image having colors within a source color gamut;

receiving a plurality of rendering intents, wherein each rendering intent defines a mapping of colors from the source color gamut to a destination color gamut;

generating a plurality of rendered images by rendering the received image according to [a corresponding rendering intent] the plurality of rendering intents;

simultaneously previewing a plurality of difference images, wherein each difference image represents a difference between [a rendered image] one of the plurality of rendered images and a reference image; and

selecting a rendering intent by receiving from a user a selected difference image from the plurality of simultaneously previewed difference images.

17. (Amended) The method of claim [10] 16, wherein the contours of the topographical map [has a color basis] are represented as colors.

18. (Amended) A computer program product, stored on a machine-readable medium, comprising instructions operable to cause a programmable processor to:

receive a source color image having colors within a source color gamut;

receive a plurality of rendering intents, wherein each rendering intent defines a mapping of colors from the source color gamut to a destination color gamut;

generate a plurality of rendered images by rendering the received image according to [a corresponding rendering intent] the plurality of rendering intents;

simultaneously preview a plurality of difference images, wherein each difference image represents a difference between [a rendered image] one of the plurality of rendered images and a reference image; and

select a rendering intent by receiving from a user a selected difference image from the plurality of simultaneously previewed difference images.